Notice of Allowability	Application No.	Applicant(s)	
	10/523,376	BLOEMEN ET AL.	
	Examiner	Art Unit	
	David N. Spector	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Application filed 01 February 2005*.

2. ☒ The allowed claim(s) is/are *1-11*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 0905/20050921
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Claims 1-11 are allowed. All claims pending thus being allowable, prosecution on the merits is closed in this application.

Reasons for Allowance

The following is a statement of reasons for the indication of allowable subject matter: the prior art taken either singly or in combination fails to anticipate or fairly suggest the features/limitations of applicant's independent claims, in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper. More specifically, with respect to:

Independent Claim 1 the prior art taken either singly or in combination fails to anticipate or fairly suggest an optical scanning device for scanning an information layer of an optical record carrier including, *inter alia*, a lens comprising a synthetic resin on a substrate, the total thickness **t** of the lens satisfying the condition:

$$0.8 < \frac{t - 1.1\phi + 1.1}{1.18 - 2.28\left[FWD + \frac{t_d}{n_d}\right]} < 1.2$$

wherein **FWD** $\mathbf{t_d/n_d} < 0.51$ (**FWD** is the free working distance between the lens and carrier and **ϕ** is the diameter of the entrance pupil of the lens, and where **t**, $\mathbf{t_d}$, **ϕ** and **FWD** are expressed in millimeters) taken together in combination with the totality of particular features/limitations recited therein.

Independent Claim 7 the prior art taken either singly or in combination fails to anticipate or fairly suggest a lens comprising a synthetic resin on a substrate, the total thickness **t** of the lens satisfying the condition:

$$0.8 < \frac{t - 1.1\phi + 1.1}{1.18 - 2.28\left[FWD + \frac{t_d}{n_d}\right]} < 1.2$$

wherein **FWD** $\mathbf{t_d/n_d}$ < 0.51 (**FWD** is the free working distance between the lens and carrier and **ϕ** is the diameter of the entrance pupil of the lens, and where **t**, $\mathbf{t_d}$, **ϕ** and **FWD** are expressed in millimeters) taken together in combination with the totality of particular features/limitations recited therein.

Independent Claim 9 the prior art taken either singly or in combination fails to anticipate or fairly suggest a method for manufacturing a lens system comprising, inter alia, at least one lens formed of a synthetic resin on a substrate, the total thickness **t** of the lens satisfying the condition:

$$0.8 < \frac{t - 1.1\phi + 1.1}{1.18 - 2.28\left[FWD + \frac{t_d}{n_d}\right]} < 1.2$$

wherein **FWD** $\mathbf{t_d/n_d}$ < 0.51 (**FWD** is the free working distance between the lens and carrier and **ϕ** is the diameter of the entrance pupil of the lens, and where **t**, $\mathbf{t_d}$, **ϕ** and **FWD** are expressed in millimeters) taken together in combination with the totality of particular features/limitations recited therein.

Independent Claim 11 the prior art taken either singly or in combination fails to anticipate or fairly suggest a method of manufacturing an optical scanning device for scanning an information layer of an optical record carrier that includes providing, *inter alia*, a lens comprising a synthetic resin on a substrate, the total thickness **t** of the lens satisfying the condition:

$$0.8 < \frac{t - 1.1\phi + 1.1}{1.18 - 2.28\left[FWD + \frac{t_d}{n_d}\right]} < 1.2$$

wherein **FWD** $\mathbf{t_d/n_d}$ < 0.51 (**FWD** is the free working distance between the lens and carrier and $\boldsymbol{\phi}$ is the diameter of the entrance pupil of the lens, and where **t**, $\mathbf{t_d}$, $\boldsymbol{\phi}$ and **FWD** are expressed in millimeters) taken together in combination with the totality of particular features/limitations recited therein.

Other Remarks/Information

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The International Search Report prepared for the parent (PCT/IB2003/003251) of the instant National Stage filing has been reviewed and considered by the examiner.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hendricks (U.S. Patent No. 7,050,246) and Hendricks et al. (U.S. Patent No. 6,665,132) disclose objective lenses, used in an optical scanning device for scanning an information layer of an optical record carrier, which is formed of a synthetic resin on a substrate; Hendricks et al. (U.S. Patent No. 7,009,744) discloses an objective lens, used in an optical scanning device for scanning an information layer of an optical record carrier, which is formed of a single material, the thickness of which **t** satisfies a very similar conditional expression as the instant invention, but without the factor (–1.1$\boldsymbol{\phi}$ + 1.1) appearing in the numerator therein). Hendricks (U.S. Pat-

ent No. 6,995,929) discloses other conditional relationships applicable to lenses formed of a synthetic resin on a substrate. Hendricks et al. (U.S. Patent No. 7,034974) discloses other particular conditional relationships that are applicable to objective lenses used for scanning an information layer of an optical record carrier. Braat (U.S. Patent No. 6,038,077) discloses an analysis of the imaging performance of lenses used for scanning an information layer of an optical record carrier. Howden (U.S. Patent No. 4,319,945) discloses a method of producing aspherical lenses formed of a synthetic resin on a substrate.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any other inquiry concerning this communication or earlier communications from the examiner should be directed to David N. Spector whose telephone number is (571) 272-2338. The examiner can normally be reached at this number Monday through Friday between 6:00 AM and 2:30 PM. The Official FAX number for the United States Patent and Trademark Office is (571) 273-8300.

July 31, 2006

DAVID N. SPECTOR
PRIMARY EXAMINER
ART UNIT 2873